

## **REMARKS**

As of the 12 December 2007 *Office Action*, Claims 1-13, 45, 46, 49-51 are pending in the Application. In the *Office Action*, the Examiner rejects all pending claims. The Applicant with great appreciation thanks the Examiner for careful examination given to the Application. By this *Response*, Applicant amends certain claims and presents new Claims 52 and 53 to clarify the currently claimed embodiments of the invention. No new matter is believed introduced in this submission as at least Fig. 4 and ¶¶ [0025] – [0030] of the *Specification* fully support the subject matter of the amendments. (see U.S. Patent Application Publication No. 2002/0170648).

Applicant submits this response solely to facilitate prosecution. As such, Applicant reserves the right to present new or additional claims in this Application that have similar or broader scope as originally filed. Applicant also reserves the right to present additional claims in a later-filed continuation application that have similar or broader scope as originally filed. Accordingly, any amendment, argument, or claim cancellation presented during prosecution is not to be construed as abandonment or disclaimer of subject matter.

After entry of this *Response*, Claims 1-13, 45, 46, 49-53 are pending in the Application. Applicant respectfully asserts that the pending claims are in condition for allowance over the references of record, and respectfully requests reconsideration of the claims in light of this submission. Applicant, accordingly, believes that the Application is allowable for at least the following reasons.

### **I. Rejections Under 35 U.S.C. §103**

In the *Office Action*, Claims 1-3, 7-9, and 13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2001/0000738 to Mathieu (“Mathieu”) in view of U.S. Patent No. 4,882,888 to Moore (“Moore”) and U.S. Patent No. 3,284,980 to Dinkel (“Dinkel”).

Claims 4 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mathieu, in view of Moore and Dinkel, further in view of U.S. Patent No. 3,887,952 to Nicoll Jr. (“Nicoll”).

Claims 5 and 11 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mathieu, in view of Moore and Dinkel, further in view of U.S. Patent No. 4,828,635 to Flack et al. (“Flack”).

Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mathieu, in view of Moore and Dinkel, further in view of U.S. Patent No. 4,450,022 to Galer (“Galer”).

Claims 45, 46, and 49-51 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mathieu in view of Moore.

The USPTO’s *Examination Guidelines For Determining Obviousness* (“*Obviousness Guidelines*”) implement the Supreme Court’s recently reaffirmed “functional approach” to obviousness determinations, which dictates that “[W]hen considering obviousness of a combination of known elements, the operative question is thus ‘whether the improvement is more than the **predictable use** of prior art elements according to their **established functions**.’” (*Examination Guidelines For Determining Obviousness*, 72 Fed. Reg. 57527 (Oct. 10, 2007), citing *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007).)

The *Obviousness Guidelines* further state that “[T]he key to supporting any rejection under 35 U.S.C. 103 is the **clear articulation** of the reason(s) **why** the claimed invention would have been obvious.” (*Id.* at 57528).

The *Obviousness Guidelines* clearly reflect the Federal Circuit’s requirement that “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning** with some rational underpinning to support the legal conclusion of obviousness.” *In Re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Claims 1-13, 45, 46, 49-51 as amended and newly presented Claims 52 and 53 are patentable because the cited combinations do not teach or suggest **all the claim features**. Further, the features recited in pending claims are not a predictable use of the combined teachings of the cited references.

***a. Claims 1-7 Are Patentable Over The Cited References***

Claim 1, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 1 recites a cementitious core having an upper principal surface and a lower principal surface, the lower principal surface not having a reinforcement mesh material embedded therein or adhered thereto. The cited references fail to teach or disclose this feature.

Mathieu discloses a cementitious panel having a core 10. (see Fig. 12 of Mathieu). Mathieu’s core 10 has first and second broad faces. Both the first and second face of Mathieu’s core 10 have a reinforcing mesh either embedded therein or adhered thereto. (Mathieu,

¶¶[0022]-[0025]). In particular, a first mesh 12 is adhered to the bottom face of the core 10 by means of a slurry 4, and a second mesh 12 is embedded within the top surface of the core 10. (Mathieu [0231]).

In contrast, Claim 1 recites “a cementitious core having an upper principal face and a lower principal face, the lower principal surface not having reinforcement mesh material embedded in or adhered to the lower principal surface”. Clearly, Mathieu discloses the very opposite of the cementitious core having a lower surface as recited in Claim 1 because Mathieu’s core has a mesh reinforcing material adhered to or embedded in both of its principal surfaces.

Moore, Dinkel, Flack, Nicoll, and Galer fails to cure Mathieu’s defects with respect to Claim 1. Both principal surfaces of Dinkel’s core have a mesh reinforcement embedded therein. (see Fig. 2 of Dinkel). Galer discloses a cementitious panel with reinforcing fiber networks 14 and 30 embedded in both surface of the panel. (see Fig. 4 of Galer) Moore is directed to a laminated gypsum board panel and does not teach a cementitious core as recited in Claim 1. Nicoll discloses paper board boat and does not teach a cementitious core as recited in Claim 1. Flack discloses polystyrene insulation panel and does not teach a cementitious core as recited in Claim 1.

Clearly, none of the cited references could be relied upon to modify Mathieu’s core to comprise a surface without a reinforcing mesh embedded therein or attached thereto. Indeed, no reference would support such a modification because Mathieu explicitly teaches embedding or attaching a reinforcing mesh to both surfaces of the core. (Mathieu, ¶ [0025] and Fig. 12).

For at least these reasons, Mathieu, Moore, Dinkel, Flack, Nicoll, and Galer fail to disclose, teach or suggest each and every feature of Claim 1. Thus, Applicant respectfully submits that Claim 1 is patentable over the cited references, and is in condition for allowance. Further, Claims 2-7 are also believed to be in condition for allowance at least due to their dependence upon Claim 1, and further features defined therein.

***b. Claims 8-13 Are Patentable Over The Cited References***

Claim 8, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 8 recites a cementitious core having an upper principal face and a lower principal face, the upper principal face having a single layer of pervious reinforcing mesh embedded therein. The cited references fail to teach or disclose this feature.

Mathieu discloses a cementitious panel having a core 10 (see Fig. 12 of Mathieu, Mathieu, ¶¶ [0022]-[0025]). Mathieu's core 10 has first and second broad faces. Both the first and second face of Mathieu's core have a reinforcing mesh 3 and 12 either embedded therein or adhered thereto. (Mathieu, ¶¶ [0022]-[0025]). The first surface (bottom) of the core 10 has parallel mesh bands 5 and 6 adhered/embedded therein, forming a second layer of mesh material overlapping mesh 3 on the first surface. (Mathieu, ¶¶ [0028], [0040], and [0229]). Similarly, the second surface (top) of the core 10 has additional mesh bands 14 and 15 embedded therein forming a second layer overlapping the of mesh material 12 on the second surface. (see Fig. 4 and ¶ [0232] of Mathieu). Alternatively, Mathieu's core 10 may have bands 5a and 6a wrapped around the edges of the core and embedded in the top and bottom surfaces forming an second layer of mesh material overlapping mesh materials 3 and 12. (see Fig. 11 ¶¶ [0028], [0040], and [0241] of Mathieu). Clearly, both the first and second surfaces of Mathieu's core 10 have two layers of mesh material embedded therein or adhered thereto.

In contrast, Claim 8 recites “a cementitious core having an upper principal face and a lower principal face, the upper principal face having a single layer of pervious reinforcing mesh embedded in or adhered to the upper principal surface”. Mathieu fails to teach a lower principal face of a cementitious core having a single mesh layer as recited in Claim 8 because both surfaces of Mathieu's core have two layers of mesh reinforcing material.

Moore, Dinkel, Flack, Nicoll, and Galer cannot be relied upon to modify Mathieu's panel to have a single embedded mesh reinforcing layer in a surface of the core. Mathieu's principal goal is to provide a panel with reinforced edges. (Mathieu, [0001], [0018]-[0019]). Mathieu accomplishes this objective by providing a plurality of overlapping layers of mesh reinforcing material along the edge portions of the panel. (see Figs. 4 and 11 of Mathieu). The cited references fail to teach an alternative means of reinforcing the edge portions with a single layer of mesh that could be relied upon to modify Mathieu panel. Consequently, Mathieu and the remaining cited references, alone or in combination, fail to teach or discloses a construction element as recited in Claim 8.

For at least these reasons, Mathieu, Moore, Dinkel, Flack, Nicoll, and Galer fail to disclose, teach or suggest each and every feature of Claim 8. Thus, Applicant respectfully submits that Claim 8 is patentable over the cited references, and is in condition for allowance.

Further, Claims 9-13 are also believed to be in condition for allowance at least due to their dependence upon Claim 8, and further features defined therein.

*c. Claims 45, 46, and 49-51 Are Patentable Over The Cited References*

Claim 45, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 45 recites a construction panel having a cement core, an upper stratum consisting of a pervious reinforcement mesh coated in a cement slurry embedded in the upper principal face of the core, and a lower stratum consisting of an impervious non-cementitious reinforcement web layer disposed directly on the lower principal face of the core.

Mathieu discloses a cementitious panel having a core 10 (see Fig. 12 of Mathieu). The bottom layer of the core 10 comprises of mesh reinforcement member 3, a cement slurry 4 and additional reinforcement bands 5 and 6. (see Fig. 12 and ¶ [0229] of Mathieu). The top layer of the core 10 comprises a mesh reinforcement member 12 and additional mesh bands 14 and 15 embedded therein. (see Fig. 4 and ¶ [0232] of Mathieu). Alternatively, the top layer of Mathieu's core 10 can comprise a mesh 12 and additional mesh bands 5a and 6a wrapped around the edges of the core and embedded in the surface of the core 10. (see Fig. 11 ¶¶ [0028], [0040], and [0241] of Mathieu). Clearly, Mathieu does not disclose a layer corresponding to an upper stratum consisting of a reinforcement mesh coated in a cement slurry embedded in a cement core, as recited in Claim 45. Further, Mathieu does not disclose a layer corresponding to a lower stratum consisting of a reinforcement web disposed on the face of the core.

Moore, Dinkel, Flack, Nicoll, and Galer cannot be relied upon to modify Mathieu's panel to have a single embedded mesh reinforcing layer in a surface of the core. Mathieu's principal goal is to provide a panel with reinforced edges. (Mathieu, [0001], [0018]-[0019]). Mathieu accomplishes this objective by providing a plurality of overlapping of separate mesh reinforcing members along the edge portions of the panel. (see Figs. 4 and 11 of Mathieu). The cited references fail to teach an alternative means of reinforcing the edge portions with a single layer of mesh that could be relied upon to modify Mathieu's panel. Consequently, Mathieu and the remaining cited references, alone or in combination, fail to teach or disclose a construction panel as recited in Claim 45.

For at least these reasons, Mathieu, Moore, Dinkel, Flack, Nicoll, and Galer fail to disclose, teach or suggest each and every feature of Claim 45. Thus, Applicant respectfully submits that Claim 45 is patentable over the cited references, and is in condition for allowance.

Further, Claims 46 and 49-51 are also believed to be in condition for allowance at least due to their dependence upon Claim 45, and further features defined therein.

*d. Claims 52 and 53 Are Patentable Over The Cited References*

Claims 52 and 53, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 52 recites a backerboard panel consisting of a cementitious core having first surface and a second surface, a reinforcement mesh material embedded in the first surface, and an impervious membrane disposed directly on the second surface. Claim 53 recites, a backerboard panel consisting of a cementitious core having first surface and a second surface, a reinforcement mesh material embedded in the first surface, a coating disposed atop the first surface, and an impervious membrane disposed directly on the second surface.

Mathieu discloses a cementitious panel having a core 10 (see Fig. 12 of Mathieu). The bottom layer of the core 10 comprises of mesh reinforcement member 3, a cement slurry 4 and additional reinforcement bands 5 and 6. (see Fig. 12 and ¶ [0229] of Mathieu ). The top layer of the core 10 comprises a mesh reinforcement member 12 and additional mesh bands 14 and 15 embedded therein. (see Fig. 4 and ¶ [0232] of Mathieu). Alternatively, the top layer of Mathieu's core 10 can comprise a mesh 12 and additional mesh bands 5a and 6a wrapped around the edges of the core and embedded in the surface of the core 10. (see Fig. 11 ¶¶ [0028], [0040], and [0241] of Mathieu). Clearly, Mathieu does not disclose a backerboard panel consisting of a core, a mesh embedded in the first surface of the core, and a impervious membrane disposed on the second surface because Mathieu's panel comprises additional elements not recited in claims 52 and 53, such as two mesh members, one on each side of the core, and additional mesh members along the edges.

Moore, Dinkel, Flack, Nicoll, and Galer cannot be relied upon to modify Mathieu's panel to have a single embedded mesh reinforcing layer in a surface of the core. Mathieu's principal goal is to provide a panel with reinforced edges. (Mathieu, [0001], [0018]-[0019]). Mathieu accomplishes this objective by providing a plurality of overlapping of separate mesh reinforcing member along the edge portions of the panel. (see Figs. 4 and 11 of Mathieu). The cited references fail to teach an alternative means of reinforcing the edge portions with a single layer of mesh that could be relied upon to modify Mathieu's panel. Consequently, Mathieu and the remaining cited references, alone or in combination, fail to teach or disclose a construction panel as recited in Claims 52 and 53.

For at least these reasons, Mathieu, Moore, Dinkel, Flack, Nicoll, and Galer fail to disclose, teach or suggest each and every feature of Claims 52 and 53. Thus, Applicant respectfully submits that Claims 52 and 53 are patentable over the cited references, and are in condition for allowance.

## **II. Fees & Express Request for Continued Examination Under 37 CFR § 1.114**

Applicant files this *Response* within four months of the final *Office Action* with no additional claims beyond those paid for upon filing of the Application. Thus, Applicant believes that a one month extension of time and no claims fees are due. Applicant expressly requests continued examination pursuant to 37 C.F.R. § 1.114. Applicant submits this *Response* as the required RCE submission and pays the appropriate RCE fee via EFS-Web. No additional fees are believed due. The Commissioner is authorized, however, to charge any fees that may be required, or credit any overpayment, to Deposit Account No. 20-1507 for full acceptance of this submission, and to keep the Application pending.

## **III. Conclusion**

This *Response* is believed to be a complete response pursuant to 37 CFR §1.121. Applicant respectfully submits that after entry of this *Response* the Application is fully in condition for allowance. The Examiner is invited to contact the undersigned should any other issues remain prior to the allowance of this Application. Early and favorable action is respectfully requested.

Respectfully submitted,

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**DATE: 7 April 2008**

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USPTO Reg. No. 60,026